

REMARKS

Pending claims 2-60 in this application were made subject to a restriction requirement by the Examiner. Group I claims 13-38 were identified as being drawn to a liquid transfer device classified in class 422, subclass 864.17; Group II claims 39-41 and 2-12 were identified as being drawn to a liquid dispenser classified in class 73, subclass 864.17; Group III claims 42-47 were identified as being drawn to an apparatus for pipetting liquid from a source of liquid to wells disposed in plates, classified in class 422, subclass 63; and Group IV claims 48-60 were identified as being drawn to a method for transferring liquid from a first set of plates having multiple wells to a second set of plates having multiple wells, classified in class 436, subclass 180.

During a telephone conversation between the undersigned and the Examiner on September 12, 2003, Applicants made a provisional election, without traverse, to prosecute the invention of Group II, claims 39-41 and 2-12. This election without traverse is hereby confirmed.

As a consequence, claims 13-38 and 42-60 were withdrawn from further consideration by the Examiner as being drawn to a non-elected invention.

As requested by the Examiner, Applicants have reviewed the specification carefully, and have noted several minor errors. Applicants have amended the specification to correct these errors, which include correction of reference numerals, addition of figure numbers and clarification of the manner of operation, all of which are believed to be apparent from other portions of the specification, and/or from the drawings. It is believed that no new matter has been added.

In view of the foregoing restriction requirement, Applicants are canceling claims 13-38 and 42-60 without prejudice to the filing of one or more divisional applications at a later time.

Claims 2-12 and 39-41 have been examined. Claims 2, 10 and 39 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,182,719 (Yahiro). Claims 2, 10 and 39 also have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,399,024 (Bevirt). Claims 4-6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bevirt, further in view of U.S. Patent No. 5,306,510 (Meltzer). Claims 7-9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bevirt et al., in view of 756903.1

Meltzer, and further in view of U.S. Patent No. 6,589,483 (Maeda). Claims 11 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bevirt et al., further in view of Maeda.

In addition to the foregoing, claim 5 has been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite, because of the recitation "all of the space" on line 2 which lacks sufficient antecedent basis.

It is noted with appreciation that the Examiner has indicated that claims 3 and 40-41, while objected to as being dependent upon a rejected base claim, are allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims.

In response to the rejection thereof, claim 39 has been amended to recite that the slideways are generally horizontally extending and that the dispensing head is unattached to the slideways so as to be slidable into and out of the housing in a generally horizontal direction.

In contrast, in Yahiro, which was cited in rejecting claim 39, guiderails 23, which were identified by the examiner as being slideways, are admittedly vertically disposed on the vertical surface 21A. (See paragraph 16 of the office action.) Thus, any movement of sliders 24 is in a vertical direction, and not in a horizontal direction as recited in claim 39. Moreover, there is no teaching whatsoever that the distribution head 20 of Yahiro can be slid into or out of a housing in a generally horizontal direction, as presently recited in claim 39. For at least these reasons, it is submitted that claim 39 is patentable over Yahiro.

With respect to Bevirt et al., the Examiner concluded that "it is clear that in order for the mechanical coupling and the electrical connector to engage the autopipetter that the dispense head is slid into a slot, opening or other means." (See paragraph 17.) However, Applicants do not agree with this conclusion drawn by the Examiner. Bevirt et al. neither disclose nor suggest any sort of horizontal slideways that allow removal of the dispensing head in a horizontal direction. Autopipetter 90 is illustrated in Fig. 9 and neither the drawing nor the description of that drawing discloses or suggests the presence of slideways. Moreover, claim 39 recites that the dispensing head is unattached to the slideways. In Bevirt et al., even if there were any slideways in the autopipetter (which Applicants dispute), there would have to be some attachment between the slideways and the dispensing head such as at brackets 21 (Fig. 2) or electrical connector 22, to prevent the dispensing head from moving with respect to the autopipetter. Thus, it is

submitted that claim 39 is patentable over Bevirt et al., at least since Bevirt et al. fail to disclose or suggest any sort of slideways, particularly slideways that would allow the dispensing head to move in a horizontal direction for removal thereof.

Claim 2 has been amended to recite that the manually operable apparatus is disposed at a point spaced vertically above the slideways for attaching the dispensing head to the housing. It is noted that any attachment between distribution head 20 and any sort of housing in Yahiro must either occur on block 25 or on sliders 24. Neither location is disposed above the dispensing head in a vertical direction, as presently recited in claim 2. Rather, block 25 is disposed below dispensing head 20, while sliders 24 are horizontally spaced from head 20. There is no disclosure whatsoever in Yahiro of any sort of attachment above sliders 24.

With respect to Bevirt et al., since there are no slideways, there is no suggestion or disclosure whatsoever of a manually operable attachment disposed vertically above slideways. At best, if the Examiner is correct and there are some sort of slideways that are not shown (which Applicants dispute), any connection would inherently be at the same level as the slideways or below, and not above, since any such slideways would have to be at the very top of pipette head 10 where they are not visible. If it is assumed that latch 19 is a manually operable apparatus, it is noted that latch 19 is disposed below the upper edge of pipetting head 10 and thus below any possible slideways. Therefore, latch 19 does not meet the limitation of a manually operable apparatus attached to the dispensing head for attaching a dispensing head to the housing at a point spaced vertically above the slideways, as now recited in claim 2. For at least these additional reasons, it is submitted that claim 2, as amended, is allowable over the cited art.

Claim 3 has been amended to bring it into conformance with amended claim 2, to change the “apparatus for retaining” to “apparatus for attaching.” Since claim 3 was already indicated to be allowable, it is submitted that claim 3 remains allowable over the cited art.

Claims 4-12 are all dependent from claim 39, and are allowable for at least the same reasons as claim 39.

In addition, in response to the rejection of claim 5 under 35 U.S.C. § 112, second paragraph, Applicants have deleted the complained of words “of the” from line 2 of the claim. It is submitted that this amendment overcomes the rejection of claim 5 under 35 U.S.C. § 112, second paragraph.

Claims 61-69 have been added to this application to further define the invention. Claim 61 is similar to claim 4, and recites a plurality of disposable pipette tips, each tip being associated with one of the chambers. Claim 61 further recites that each tip has a first end with an enlarged opening that is in direct fluid communication with an associated chamber in the dispensing head, without any nozzle between the tip and the chamber or extending into the first end of the tip. This limitation is supported throughout the specification, such as at page 21, lines 5-23. In contrast, in Bevirt et al., the disposable pipette tips 17 are mounted on the end of a nipple 60 which extends into the end of the tip (see Fig. 6D). In Yahiro, nozzles 27 are used to attach pipette tips and nozzles 27 also extend into the ends of the tips.

Meltzer was also cited in rejecting claim 4. In Meltzer, tip holders 36 are disclosed which are threaded onto the lower ends 35 of the Z-axis racks. Tip holders 36 are specifically shown as extending into disposable pipette tips 39 (see Figs. 6 and 7). Meltzer is again to be contrasted with claim 61, which specifically excludes such nozzles that extend into the pipette tip. Furthermore, it is noted that there are no chambers disclosed in Meltzer which have pistons associated therewith which draw or expel fluid. Rather, a tubing 32 is inserted over top hat 37 and exits on a side of the frame for connection to external pumps. Therefore, one of ordinary skill in the art would not combine Meltzer with Bevirt et al. or even Yahiro, since Bevirt et al. and Yahiro relate to very different sort of pumping arrangements than Meltzer. However, even if one were to combine these references, the combination would not disclose or suggest a plurality of disposable pipette tips in which the enlarged open end of the pipette tip is in direct fluid communication with a chamber having a piston riding therein, and in which no nozzle is disposed between the first end of the tip and the chamber opening or extends into the pipette tip. For at least these reasons, it is believed that claim 61 is patentable over the cited art.

Claims 62-65 are all dependent from claim 61. Claim 62 recites a seal, and claim 63 recites a tray carrying the nozzle tips and a clamp clamping the tray against the housing and the first ends of the tips against openings of associated chambers. It is noted that claim 7, which has similar limitations, was rejected as being unpatentable over Bevirt et al. in view of Meltzer, and further in view of Maeda. As noted above, one of ordinary skill would not combine Maeda or Bevirt et al. with Meltzer, since each discloses entirely different pumping arrangements that are not compatible with one another. Meltzer is connected to an external pump and does not

disclose the piston and chamber arrangement of either Bevirt et al or Maeda. Even if combined, neither Bevirt et al. (nor Yahiro) nor Meltzer nor Maeda discloses or suggests any sort of tray for carrying disposable pipette tips. Moreover, none of these references discloses pipette tips being in direct fluid communication with the open ends of chambers and without a nozzle between the first end of the pipette tip and the chamber opening, as recited in claim 61. While Maeda does show a tray and a clamp for holding the tray against the housing, the tray disclosed by Maeda is a nozzle holder 97 which only contains nozzles 99 and 101, which are positioned between the chambers and the pipette tips. The tray of Maeda is not taught to contain any pipette tips. Therefore, Maeda does not suggest or teach clamping of the first ends of the tips against the chamber openings as recited in claim 63. Rather, disposable pipette tips are inserted on the lower ends of the nozzles 99 and 101 of Maeda and are removable therefrom. Furthermore, the tips of Maeda are not removable by removing the tray from the clamp as recited in claim 65. Rather, these tips of Maeda are removed by vertically movable eject plate 123. Therefore, claims 62-65 are all distinguishable over Bevirt et al. (or Yahiro) in combination with Meltzer and Maeda for at least these reasons.

Claim 66 constitutes claim 3 rewritten in independent form to include all the limitations of claim 39, and claim 2. In addition, claims 67 and 68 are identical to claims 40 and 41, which were previously indicated to be allowable. Therefore, it is submitted that claims 66-68 are all allowable over the cited art.

New claim 69 recites a manually operable apparatus which is attached to the dispensing head for retaining the dispensing head within the housing and which removably couples the pistons in the dispensing head to the apparatus for moving the pistons. Yahiro discloses no manually operable apparatus at all attached to the dispensing head for retaining the dispensing head in the housing, let alone one that couples the pistons to the apparatus for moving the pistons. The only manually operable apparatus that may possibly exist in Bevirt et al. (although Applicants do not concede that it is in fact manually operable) is latch 19. Bevirt et al. discloses latch 19 as being for "releasing the mechanical coupling (not visible) which joins the head to an autopipetter (not shown))" (see col. 5, lines 8-10). Latch 19, however, clearly does not couple the pistons to the apparatus for moving the pistons. Maeda and Meltzer disclose no such

manually operable apparatus whatsoever. Thus, claim 69 is believed to be allowable over the cited art.

New claim 70 is dependent from claim 69 and recites that the manually operable apparatus comprises a plurality of shafts. Claim 71 is dependent from claim 70 and recites a plate as part of this apparatus for moving the pistons and a manually operable device coupling the shafts and the plate. New claim 72 recites that this manually operable device is capable of being manually detached from the plate. These features are neither shown nor suggested by any of the cited art. Thus, claims 69-72 are all believed to be allowable.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

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